Global Diversified Infrastructure Fund of Funds

A Compendium of the Infrastructure Market and Potential Opportunities







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Table of Contents

Executive Summary	
Defining Infrastructure Assets	3
Infrastructure Investment History	4
i. Across Asset Classes and Geographies	4
ii. Private Ownership Legislation	5
iii. Exit Strategies	6
Infrastructure Investment Market	8
i. Investment Need	8
ii. Overall Market Size	10
Infrastructure Expected Returns and Recent Investments	12
i. Infrastructure Sector Highlights	12
ii. Expected Returns and Yields	14
iii. Recent Deal Trends	15
iv. Future Deals and Opportunities	16
Infrastructure Portfolio Dynamics	17
i. Where in Investment Portfolio?	17
ii. Correlations	18
iii. Historical Return Performance	19
iv. Risk/Return Analysis	21
v. Investment Alternatives	22
vi. Benchmarking	23
Analysis of Macro Infrastructure Issues	24
i. Infrastructure Investment Strengths	24
ii. Infrastructure Investment Weaknesses	25
iii. Untested Macro Issues	27
Conclusion	28
References	29
	ii. Private Ownership Legislation iii. Exit Strategies Infrastructure Investment Market i. Investment Need ii. Overall Market Size Infrastructure Expected Returns and Recent Investments i. Infrastructure Sector Highlights ii. Expected Returns and Yields iii. Recent Deal Trends iiv. Future Deals and Opportunities Infrastructure Portfolio Dynamics i. Where in Investment Portfolio? ii. Correlations iii. Historical Return Performance iiv. Risk/Return Analysis v. Investment Alternatives vi. Benchmarking Analysis of Macro Infrastructure Issues i. Infrastructure Investment Weaknesses





I. Executive Summary

The ability to access the infrastructure market globally has created a recent investment opportunity, which has garnered the full attention of the institutional investment community over the past few years. Over the course of 2006 and 2007, the infrastructure investment market has grown from relative obscurity and few investment options to greater than 80 fund offerings. Additionally, the availability of publicly held investment options is continuing to grow as standardized benchmarks have developed, both in the United States and abroad. Key considerations for infrastructure investment include the following:

- Viable Offshore Experience: Infrastructure investment was pioneered in the United Kingdom over 35 years ago with private financing initiatives, while Australia and other countries followed suit in the 1980's and 1990's in an even greater magnitude. Globally, private ownership legislation continues to grow, and more governments are creating laws to encourage private ownership. Of those, the United States is a newer entrant supporting the public to private ownership trend.
- **Documented Need:** The infrastructure markets are fuelled by tremendous investment demand to maintain and repair existing assets and develop new assets. In the United States, infrastructure requires \$1.6 trillion to restore current assets, while globally, there are over \$3.0 trillion in documented needs.
- **Growing Institutional Acceptance:** Infrastructure assets are receiving increased interest as an asset class. Most assets are monopolistic in nature and have limited competitors, creating the opportunity for stable, long-term investment returns. Investment choices include economic assets and social assets.
- <u>Substantial Asset Class:</u> The global infrastructure market is large enough (\$12 to \$20 trillion) and has enough diversification in investment opportunities to be a unique asset class. To date, these investments have performed well in public and private, debt and equity. As an emerging asset class, few industry benchmarks currently exist, leaving institutional investors to utilize absolute return and inflation-adjusted hurdles to evaluate manager performance.
- Long-Term Portfolio Diversification: Infrastructure investments provide institutions with significant portfolio diversification benefits and increased market opportunities. However, they also subject a portfolio to increased political risks that are atypical of other investment choices. Some of these risks have yet to be tested, while others are well understood.
- <u>Untested Market Risks:</u> Private ownership of public assets can be highly controversial (Political Risk). Additionally, limited manager track records, exit strategies and market liquidity have not been fully tested through a long-term market cycle.





Increasing US Opportunity: Infrastructure investment opportunities are growing in the United States with most opportunities centered in transportation. Increased institutional comfort in these deals will likely broaden the available investment options and types of funds offered.

Given the market and potential return opportunities, institutional investors should consider infrastructure a strategic investment allocation. Several investment strategies are available to meet various pension objectives, whether it be absolute returns, inflationary hedging, or current income generation. The mix of investment options also provides institutions the ability to determine the appropriate risk/return threshold and the amount of liquidity desired. We believe the asset class provides significant opportunities to investors even with the limited track record on infrastructure offerings.





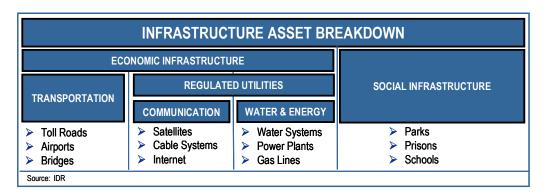
II. Defining Infrastructure Assets

Starting with the failure of the levy systems in New Orleans, followed by the collapse of the Mississippi River Bridge in Minnesota on August 1, 2007, American infrastructure capital needs were brought to the forefront of America. The aging stock of infrastructure continues to deteriorate and the demand for public and private investment continues to grow. The question now becomes, which entity is going to address this growing need?

However, an even more fundamental question also exists, what are infrastructure assets? According to the American Heritage Dictionary, infrastructure comprises the "basic facilities, services and installations needed for the functioning of a community or society, such as transportation and communication systems, water and power lines, and public institutions including schools, post offices and prisons." The dictionary also notes that the term infrastructure has been used since 1927 to refer to the public works required for an industrial economy to function or the installations necessary for the defence of a country.

The expectation most have is that infrastructure assets primarily involve government regulated monopolies and governmentally maintained assets. Unfortunately, classification is not that simple. When defining infrastructure investments, the common definition accepted in the institutional investment management community is "the physical assets that are needed to provide essential services to society," which has lead managers to have highly different interpretations of the definition of "essential."

In general, the infrastructure market is divided into two general sectors—economic infrastructure and social infrastructure. Economic infrastructure includes transportation assets and regulated utilities, which includes communication, water, and energy systems. Social infrastructure is more vaguely defined and may include any asset in which the government maintains control or assets that are necessary for the longevity of the population. Such assets include schools, prisons, hospitals, parks, and others.



Within these classifications, some assets require a degree of interpretation in the definition of essential, such as Morgan Stanley's purchase of Millennium Park parking facilities in Chicago. Although the asset was governmentally owned and purchased on behalf of an infrastructure fund, is a set of downtown parking garages essential to society? As the market matures, the interpretation of essential and what constitutes an infrastructure asset will evolve.





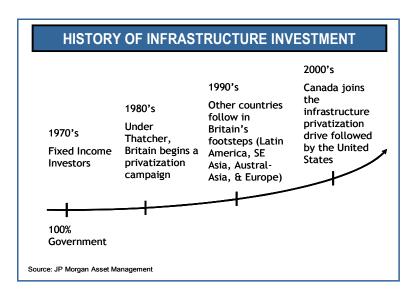
III. Infrastructure Investment History

Infrastructure investments are <u>not</u> a recent investment phenomenon. In fact, recent controversy has been about the owner of infrastructure assets. Prior to the 1970's, infrastructure assets remained in government hands, while new global Public to Private Partnerships (PPP) legislation continues to increase the ability of the private sector to own infrastructure assets. The increasing ability for buyers to purchase projects combined with the ability for firms to attain financing options has increased the potential liquidity and exit options in the asset class.

Across Asset Classes and Geographies

Infrastructure has over a 35-year investment history that extends back into the 1970's, when governments issued bonds to fund infrastructure projects. These issuances were backed by the faith and credit of the government and have a similar risk/return profile to government issued bonds. Assets in public equity infrastructure, however, have a return history that traces back to the creation of stock indices in every respective country. Public companies focused on communication, power and other corporate owned infrastructure assets have a long investment history.

With respect to private market infrastructure investment, the majority of the original track record traces back to Australia and England. In the 1980's, Prime Minister, Margaret Thatcher began a privatization campaign, while towards the late 1980's Australian governments realized that they could also sell infrastructure assets to private parties in order to capitalize on local budget deficits. As such, both countries started privatizing assets well before other countries. In the chart below, emerging countries and some developed European and Asian countries began private infrastructure investment in the 1990's, while Canada and the United States began in the 2000's.



Pension allocations to infrastructure are a newer story. Many of Australia's superannuation funds made original investment allocations in the early 1990s, while other groups delayed making investments until track records were established. Canadian and the United Kingdom

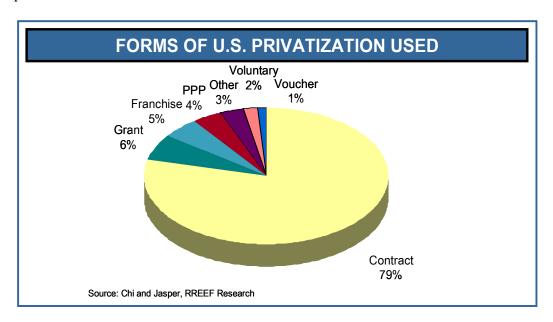




pension plans are recent entrants into the market, which interestingly enough, illustrates how more developed countries have generally been later in the acceptance of private equity infrastructure investments. Moreover, the United States pension community is currently evaluating infrastructure the asset class as a new investment class and how it fits into the traditional pension asset allocation model.

Private Ownership Legislation

The investment opportunity of infrastructure will be dependent on the current asset holders. In the United States, state and local governments are expected to release/sell assets due to several converging issues including historically poor maintenance, lack of available budget to fund needed repairs, and lack of political will to raise taxes. To meet this growing need, states have recently enacted legislation for public to private partnerships ("PPPs") to sell government assets to private owners. According to a legislative count by Macquarie, 22 states have laws that allow for PPP's, two are likely to enact such legislation, and 31 states have enacted design build legislation allowing for infrastructure investment. The primary benefits to local and state governments are two-fold: (1) the ability to bring in money necessary for other more politically expedient uses and (2) the removal of an ongoing liability. Given these fundamental benefits, it is likely that the US trend allowing for PPP's should accelerate in the future. Some of the forms of PPP privatization utilized in the United States are shown below.



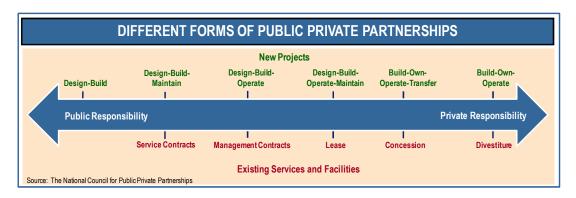
Foreign private investment has been in place for a longer timeframe. England started their PPP legislation in the 1980's, with other countries following suit in the 1990's (e.g., Japan, India, and European Union). In mature countries, researchers have found that infrastructure projects have greater success in completing projects on time and on budget. Mixed results have been experienced in developing countries. For example, Enron had made several India infrastructure investments that performed poorly. However, according to a study by Partnerships UK, PPP projects in England have been highly successful. The study reports that 83% of projects are done according to expectation, while efficiency improves over public implementation (as only 20% of PPP projects came in late or over budget versus 73% by those done by the government).







In general, PPP projects are offered in several different models. According to the National Council for Public Private Partnerships, there are nine different PPP models utilized in PPP projects. The key factor determining the type of model to utilize is the underlying government's willingness to release control. Examples include private design models, leasing cash flow streams, constant private ownership, while others involve a combination of all of the above. The chart below describes the different models utilized and the amount of public and private control that each model entails, where models on the right side of the chart involve more private party control.



Exit Strategies

Given the size of the individual investments held by the respective funds and the long-term nature of the investments, many institutions have raised concerns about potential exit strategies or future liquidity. Although nothing is guaranteed, expected exit strategies utilized by private equity infrastructure funds include:





- <u>Institutional Sales and Asset Transfers (Investment Fund Transfers)</u> Much like the institutional real estate core fund universe, sales are likely to occur on trophy assets, portfolio sales, core assets, or sub-performing assets to a single institution resulting in style creep from their particular core competencies. Additionally, as funds approach their termination date, it is likely that many will sell existing assets to other institutional funds or roll them into a different investment product (such as an open-ended fund).
- Pension Sales (Institutional JVs and Separate Accounts) As some institutional investors develop more comfort with the asset class; they may desire to own direct portfolios of assets in a separate account instead of an institutional pooled fund. Similar to the case of Ontario Teachers, other institutional investors may desire a more direct-targeted infrastructure portfolio in opposition to "blind" capital investment or those experienced in an open-ended institutional fund.
- <u>IPO or Public Offering</u> Due to the size of the assets and the composition of corporate asset ownership versus governmental sources, it is likely that roads and other governmental assets become securitized in equities. These assets will likely diversify the risk spectrum that can be attained in a securities portfolio.



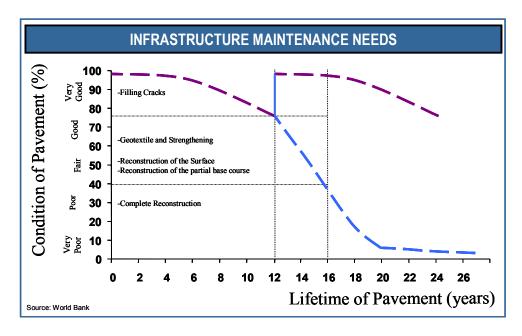


IV. Infrastructure Investment Market

The case for infrastructure investment comes from both supply and demand factors. The infrastructure market is huge (supply), while the need for infrastructure development and maintenance continues to grow.

Investment Need

The demand for infrastructure investment capital is growing domestically and internationally, based on two primary factors: development needs and maintenance needs. Development needs are often an effect of economic growth, such as the development of an airport to connect a city worldwide for various business and social meetings. Maintenance needs, however, are based on how successful owner/operators have extended the economic life of infrastructure assets. One way to illustrate this importance is to look at how maintenance needs change for pavement over the course of its lifetime. As illustrated in the figure below, pavement begins to deteriorate on an accelerated basis after 12 years (where filling cracks is the primary need to maintain the asset). As such, if the operator of a road or airport facility does not fill cracks and maintain their pavement well in the first 12 years, they may find the condition of their facilities deteriorate much more significantly in the subsequent years.



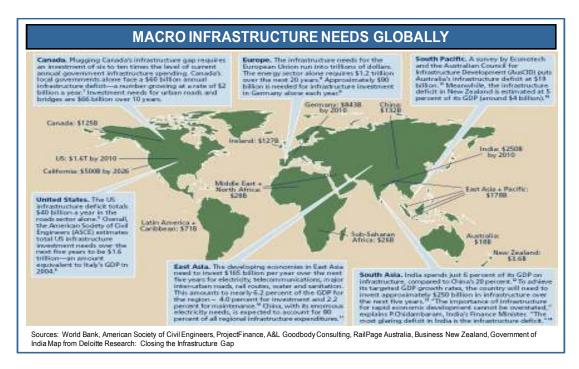
In developed nations, most of the infrastructure capital needs are for maintenance. Most developed countries have substantial infrastructure in place, but when combined with government expenditures and the political prioritization of infrastructure spending, the current condition of such assets is often poor. One of the biggest offenders of postponing maintenance is the United States government. A study by the American Society of Civil Engineers in 2005 indicated that the condition of most infrastructure assets is poor and near failure. They further asserted that the U.S. needs to spend \$1.6 trillion over the next ten years to restore the quality of domestic infrastructure assets.





AMERICAN SOCIETY OF CIVIL ENGINEERS INFRASTRUCTURE ANALYSIS							
SECTOR	2005 GRADE**	INV. NEED					
Aviation/Aerospace	D+	\$16 billion/year					
Bridges	С	\$9.4 billion/year					
Dams	D+	\$10.1 billion					
Drinking Water	D-	\$11 billion/year					
Energy	D	\$493 billion*					
Hazardous Waste	D	\$1.9 billion/year					
Navigable Water Ways	D-	\$125 billion					
Public Parks & Recreation	C-	\$6.1 billion					
Rail	C-	\$12-13 billion/year					
Roads	D	\$34.6 billion/year					
Solid Waste	C+	\$127 billion					
Transit	D+	\$20.6 billion					
Wastewater	D-	\$390 billion					
Total	D	\$1.6 trillion					
*Energy used as a plug due to lack of data and severity of needs indicated I note that an A = exceptional, B = good, C = mediocre, D = poor, F = failing,		E.					

However, the need for infrastructure investment extends across the globe. Deloitte & Touche recently published a paper where they identify investment needs that have been documented around the globe (estimated to be over \$3.4 trillion in investment needs). Like the United States that has investment needs greater than \$1.0 trillion, the European Union energy sector alone needs investment of \$1.2 trillion over the next 20 years. In many developing nations, there are billions of dollars of needed investment in order to sustain targeted GDP growth rates. On the demand side of the infrastructure market, there is a significant amount of capital needed to maintain and sustain economic growth.

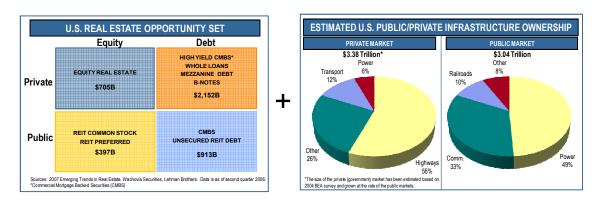




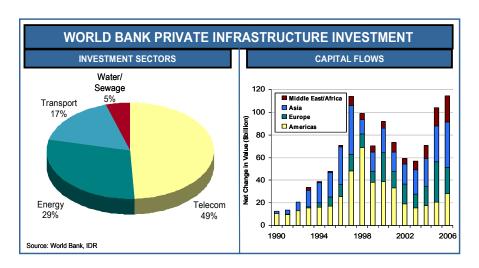


Overall Market Size

There are currently no exact estimates on the size of the global infrastructure market, but we do know the market is large and growing. In September 2006, RREEF Research performed a study to determine the size of the United States infrastructure market. In the study, RREEF used data from the Bureau of Economic Analysis and Standard and Poor's COMPUSTAT to determine that the United States infrastructure market was approximately \$5.65 trillion at the end of 2004. However, if one grew governmental assets at the same rate as public securities assets between the 2004 and 2006, public securities would have a \$3.04 trillion market value and governmental assets would have a \$3.38 trillion market value. In comparison to real estate, the market would double the availability of potential investments in real assets.



However, to get a better feel for the global size of the infrastructure investment market, some insight can be drawn from regional investment patterns. Globally, the World Bank has traced private investment in infrastructure projects in non-U.S. and developing market economies since 1990. Several interesting points can be noted from the data. For example, the peak amount of private infrastructure investment occurred in 2006 with \$114.2 billion. Since 1990, the average annual private investment in infrastructure has been greater than \$64 billion, with the last 10 years averaging nearly \$84 billion of private investment per year. The majority of new investment capital was in telecommunications (49.2% of total) and energy (29.5% of total), while the least invested sector has been water and sewerage (4.8% of total).







Another reputable group that traces global infrastructure project activities is The Infrastructure Journal. Their database reports that there has been over \$1.9 trillion of private investment in infrastructure projects globally (Americas: 24.2%, Europe: 36.8%, Asia: 20.1%, Other: 19.0%). Project activity has been well diversified, but is not necessarily indicative of actual market size.

For illustration purposes, let us assume that the infrastructure market is directly correlated to regional GDP. Given that the United States infrastructure market was \$5.65 trillion at the end of 2004, let us conservatively assume that the assets did not appreciate in value and that the U.S. comprises the entire American infrastructure market. Given that the Americas region comprises \$17.1 trillion of the \$55.6 trillion global economy, if the \$5.65 trillion infrastructure market held the same 30.8% share of global infrastructure market, the global infrastructure market would have a market size of roughly \$18.4 trillion. Using the same logic, if we use stock market capitalization rates by region as a proxy, we could estimate that the global infrastructure market has a market size of roughly \$12.6 trillion.

INFRASTRUCTURE MARKET ILLUSTRATIONS								
	NOMINAL (ODP PROXY			ST	OCK MARKE	ET CAP PRO	XY
	GDP (in \$T)	Relative %	Infrastructure Est. Size (in \$T)			Market Cap (in \$T)	Relative %	Infrastructure Est. Size (in \$T)
Americas	\$17.1	30.8%	\$5.65		Americas	\$22.7	44.7%	\$5.65
Europe	\$14.2	25.5%	\$4.69		Europe/Other	\$16.1	31.9%	\$4.03
Asia	\$22.2	39.9%	\$7.34		Asia	\$11.8	23.4%	\$2.95
Other	\$2.1	3.8%	\$0.69		Total	\$50.6	100.0%	\$12.63
Total	\$55.6	100.0%	\$18.37		Source: RREEF, V	Vorld Bank, WFE,	IDR	•

Unquestionably, the infrastructure market is extremely large, most likely to be in the range of \$12-\$20 trillion, which is of similar size to the U.S. stock market (\$15.4 trillion in 2006) and slightly smaller than the U.S. bond market (\$25.2 trillion in 2006). Given announced deals and pipeline information from different managers, we believe the U.S. market has an investment capacity of at least \$200 billion, Europe has a capacity of at least \$250 billion, and other countries have an investment capacity of at least \$350 billion over the next five years. In aggregate, we would expect there to be at least \$800 billion of total global infrastructure investment opportunities over the next five years. When accounting for leverage of 50% to 90%, this could lead to an equity investment potential of \$80.0 billion to \$400.0 billion. Of importance, is that market capacity and announced deal flow is greater than private equity capital flows to date. IDR and Quadrant track 82 fund offerings with over \$93 billion in targeted equity capital raises, while Probitas recently reported that roughly \$42 billion has been raised. *Note*: Private equity buyouts of infrastructure related public companies may greatly increase the potential investment universe for the next five years, but this is contingent on global credit conditions.





V. Infrastructure Expected Returns and Recent Investments

Infrastructure investments provide varying yields and different sectors provide potential for return enhancement and yields. Regulated utilities and certain forms of transportation assets (e.g., smaller airports and development toll roads) provide higher return potential. Given the general expectations made regarding the potential return of various assets, certain types of assets appear to be more likely to be transferred into private ownership based on what deals have recently completed and been announced.

Infrastructure Sector Highlights

Infrastructure investments, as highlighted in Section II, can be classified into several sub-sectors. At the most basic level, there are two key types of infrastructure investments, economic and social infrastructure. Economic infrastructure is comprised of transportation, communication, and water/energy sub-sectors. Social infrastructure is a unique sub-sector comprised of different assets that have unique risk/return attributes. Brief highlights are provided below:

TRANSPORTA	TION INFRASTRUCTURE OVERVIEW			
Asset Types	Toll Roads, bridges, tunnels, rail, ports, etc.			
Ownership	Municipal, some private companies			
Sources of Return	Cash Yield			
Revenues	Stable, predictable, inelastic, positively correlated with growth and inflation			
Liquidity	Unknown, MLP or REIT structures may develop			
Life Span	75 to 99 year operating leases			
Risk Level	Low to Medium			
Price/Validation	High			
Strategy	Core-Plus			
Example Project: Chicago Skyway Chicago, IL				

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Accet Types	
Asset Types	Telecom, broadcast towers, satellites, cable systems, etc.
Ownership	Regulated utilities, private companies
Sources of Return	Yield with potential appreciation
Revenues	Volatile, sensitive to changes in technology
Liquidity	Asset sales have occurred
Life Span	Long lived assets
Risk Level	Medium to high, risk of technological obsolescence
Price/Validation	Low to high
Strategy	Value added with speculative features
Example Project: Lasercom Europe	

WATER AND ENERGY INFRASTRUCTURE OVERVIEW					
Asset Types	Pipelines, energy production and distribution, water services				
Ownership	Regulated utilities, private companies				
Sources of Return	Stable, commodity exposure hedged, some fluctuation				
Revenues	Yield with potential appreciation				
Liquidity	Asset sales have occurred				
Life Span	Long lived assets, contracts in 10-20 year range				
Risk Level	Medium				
Price/Validation	Low to High				
Strategy	Core-plus with value added features				
Example Project: Asia Water Technology Asia					



Source: Evaluation Associates, Investment Managers, RREEF, UBS, IDR.



SOCIAL INFRASTRUCTURE OVERVIEW					
Asset Types	Hospitals, education facilities, courthouses, prisons, parking lots, etc.				
Ownership	Municipal or special purpose entities				
Sources of Return	Cash Yield				
Revenues	Stable, cost reimbursement				
Liquidity	N/A, leased back to government entity				
Life Span	Long lived assets				
Risk Level	Low to medium				
Price/Validation	Low to Medium				
Strategy	Core				
Example Project: Millennium Park Chicago, IL					
Source: Evaluation Associates, Investment Managers, F	RREEF, UBS, IDR.				

Expected Returns and Yields

Depending on an institutions goal, infrastructure assets offer investors an attractive investment option. Different sectors provide different risks and returns. Those with limited capital appreciation potential and cash driven yields provide a similar real asset risk profile as core real estate. In many cases, assets like toll roads, PFI and PPP projects, and regulated assets, provide a similar risk profile to core real estate with higher yields than are currently offered by core real estate funds. Additionally, the higher risk assets, like railroads, airports, development toll roads, broadcast networks, and power generation, provide a similar risk profile and return potential to those of non-core real estate funds and private equity. As such, infrastructure can provide investors a variety of options to meet, or exceed, current return and appreciation objectives.

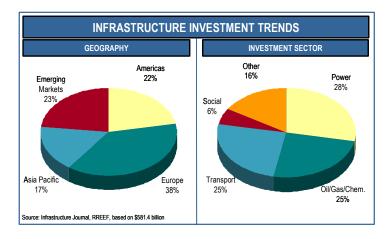
INFRASTRUCTURE ILLUSTRATIVE ASSET PERFORMANCE TARGETS							
ASSET TYPE	RISK	CASH YIELD	AVG. EQUITY IRR	CAP. APPRECIATION			
Toll Roads	Low-Medium	4-9%	8-12%	Limited			
PFIs/P3s	Low-Medium	6-12%	9-14%	Limited			
Reg. Assets	Low-Medium	6-10%	10-15%	Limited			
Rail	Medium	8-12%	14-18%	Yes			
Airports	Medium	5-10%	15-18%	Yes			
Toll Roads – Dev.	Medium-High	3-5%	12-16%	Yes			
Broadcast Network	Medium-High	8-10%	15-20%	Yes			
Power Generation	High	4-12%	12-25%	Yes			
Average	Medium	5-9%	10-15%	Modest			
Source: JP Morgan Asset Manag	ement						





Recent Deal Trends

Deal flow and the types of assets privatized vary significantly by region. Much of this is due to the differing regional needs. Interestingly enough, in developing countries, a large proportion of investment in infrastructure has been primarily in telecommunications and power related projects. In developed countries, however, the focus has been primarily on transportation and releasing government held assets to private parties. Not surprisingly, the deal flow from regions is focused on the assets that either need to be developed (developing countries) or on assets that need to be re-energized or repaired (developed countries).



As can be expected, the United States seems most likely to release transportation assets into the private market. These include toll roads, ports, bridges, and other transportation assets. As such, it seems that many funds may target a more core fund or value added risk profile based on the types of assets that have been sold and purchased by their respective parties, given the return potential of these types of assets. Interestingly enough, it can be noted that Macquarie seems to be the leader in toll road purchases, while other asset specialists have yet to be determined.







Future Deals and Opportunities

Much like the recently completed deals, recently announced deals also seem to be overweight in transportation. This trend continues to support the likelihood that funds in the United States will be focused on core and value added strategies to take advantage of the existing deal flow. However, two more opportunistic transactions have been announced, the Chicago Midway Airport and the Indiana Lottery. Both investment opportunities have the ability to generate significant yields and appreciation, depending on manager strategy and execution. As such, we may expect to see more opportunistic funds in the market as more deal flow becomes announced.



Regional needs, based on announced deal flow are also interesting (source: UBS). In the entire Americas region (which includes Central and South America), the majority focus has been on transportation with a secondary focus on utilities and other projects. European opportunities, not surprisingly, share a similar trend as most projects focus on transportation and power projects, and a minority share of announced deals have been in telecommunications. In Asian and emerging markets, however, a different trend emerges. Most projects are diversified (telecommunications, ports, water, alternatives), although power appears to be the majority focus in these countries.

Overall, the composition of countries in an investment portfolio increases both the risk profile and the likelihood of the composition of such projects. Globally, most infrastructure portfolios will likely be overweight in power and transportation, with smaller allocations targeted towards social and communication projects. On a market capitalization basis, portfolios will likely be diversified by project and region. Investors must carefully consider the amount of risk they would be willing to accept given their return objectives. Ownership structure and regional risks are important considerations for institutional investors to understand in determining their individual investment strategies.



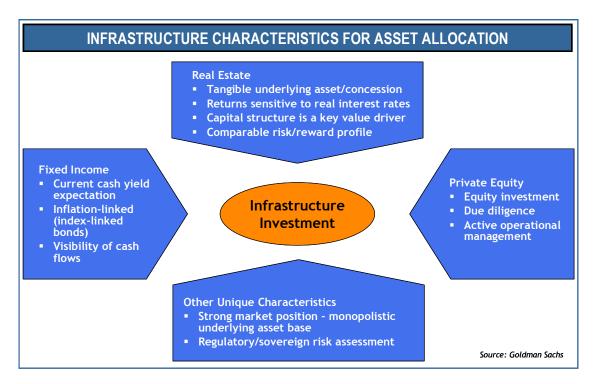


VI. Infrastructure Portfolio Dynamics

Questions arise as to whether infrastructure is a distinct asset class. Some institutional investors continue to question where the investment fits in their portfolio given their size, potential allocation, and risk appetite. That said, institutions have many choices in determining how they desire to use and invest in the asset class.

Where in the Investment Portfolio?

Infrastructure investments share attributes with several investment classes, partially because investing in infrastructure can be accomplished through the public or private markets and in equity or debt products. Infrastructure investments have the potential to behave like bonds through cash flow generation and like equities by providing significant appreciation potential.



The final position in an investment portfolio is dependent on the expected/targeted benefits. If the focus is on liabilities, infrastructure assets have long durations similar to the obligations of defined benefit plans and could fit into a liability driven investment plan or a bond portfolio. If the focus were to be on inflationary hedging characteristics, the investments may better be suited for a real asset portfolio or inflation protection allocation. If the case where these investments are measured on return capacity, infrastructure may be best suited for a private equity allocation. Diversification attributes are another consideration that may lead to a separate and a distinct allocation. Nonetheless, it should be noted that most pension plans have allocated capital into the asset class through their private equity allocations.





Correlations

In terms of asset class diversification, infrastructure has limited to no correlation to other asset classes. When compared to United States asset classes, the correlation coefficient between infrastructure investments and other asset classes varies from -0.22 to 0.18. By definition, this suggests that return performance is not tied to other asset classes. The same relationship holds true for Australia, which has a longer investment experience, and where the correlation coefficients ranged from 0.02 to 0.40.

		UNI	TED S	TATE	SINFF	RASTF	RUCTL	JRE C	ORRE	LATIC	N		
		10 VE	AR CP	IBG	ow IBC	IB GLOB	AL AGG	NSCIW	DI-AIG CC	MOND. NAREIT	DUITY N	RILEVE	RAGED
		X		X	X	LEGILO		War	DJ-AIG	MARKE		MPILE	MFRAS
10 Year	1.00												
СРІ	-0.19	1.00											
LB Govt	0.99	-0.14	1.00										
LB G/C	0.97	-0.17	0.99	1.00									
LB Global Agg.	0.76	-0.06	0.76	0.76	1.00								
S&P 500	0.11	-0.14	0.12	0.18	-0.04	1.00							
MSCI World	0.12	-0.18	0.13	0.19	0.04	0.90	1.00						
DJ-AIG Commod.	-0.13	0.37	-0.15	-0.17	-0.08	-0.18	-0.07	1.00					
NAREIT Equity	0.24	-0.18	0.24	0.28	0.04	0.51	0.49	0.08	1.00				
NPI	-0.09	0.16	-0.10	-0.11	-0.21	-0.02	0.03	0.04	0.05	1.00			
NPI Leveraged	-0.04	0.02	-0.09	-0.11	-0.01	0.10	0.16	-0.23	0.07	0.94	1.00		
Infrastructure	0.09	-0.21	0.11	0.16	0.10	0.17	0.17	-0.22	0.15	0.11	0.18	1.00	
ources: IDR and Macqua	rie Infrastru	cture Grou	р										

It can also be noted that infrastructure investments provide an inflationary hedge. Investment returns are uncorrelated to the Consumer Price Index ("CPI"). Additionally, most infrastructure concessions and governmental contracts provide an inflationary protection clause.

AUSTRALIAN INFRASTRUCTURE CORRELATION									
INFRASTRUCTURE AUST, EQUITES PROPERTY INT'L EQUITES									
INFRASTRUCTURE	1.00								
AUST. EQUITIES	0.40	1.00							
AUST. BONDS	0.02	0.12	1.00						
PROPERTY	0.17	0.51	0.60	1.00					
INT'L EQUITIES	0.04	0.61	0.07	0.47	1.00				





Historical Return Performance

Generally, returns on infrastructure assets have been strong. Private equity infrastructure has performed extremely well to date. In established portfolios, performance has ranged from 8% to 18% on a since inception leveraged basis (6% to 11% on an unleveraged basis), which compares similarly to the 10 to 15 year investment return history of real estate. However, realized investments history does not have the same depth as real estate. Preliminary indications identify that infrastructure asset sales have some liquidity, albeit most have been to other institutional holders. The pension experience has also been strong for early investors such as Ontario Municipal Employees Retirement System who have reported since inception returns of roughly 29% per annum. Established Australian fund performance has ranged from the 8% to 18% on a since inception leveraged basis (6% to 11% on an unleveraged basis).

PENSION FUND	INFRASTRUCTURE ALLOCATION	SINCE INCEPTION RETURNS
Ontario Teachers	\$4.8 billion	16.8%
Canada Pension Fund	\$848 million	5.8%(skewed by J-curve)
Ontario Municipal Employees	\$3.7 billion	29.0%
State Super Pension	\$140 million	9.0%
UniSuper	\$1.044 billion	18.0%
PSSICSS	\$1.0 billion	9.4%
HESTA Pension	Not Available	8.6%

Infrastructure debt security performance resembles that seen in governmental debt obligations. Returns have provided current yields of 4%-7% in the United States and greater in emerging markets, with a lower probability of loss. Emerging market infrastructure debt investments are substantially riskier than domestic investments and returns may not adequately compensate investors for the risk assumed. On the public securities side, investment history has been mixed. Although certain security sectors have performed better or worse over time, and a diversified portfolio should generate a 7% per annum return over a 10-year investment horizon.

The Lehman Government Index is used to compare bond performance since that there is no direct benchmark. Similar to bonds, default rates on known infrastructure related debt obligations have been relatively low. A study performed by S&P Risk Solutions and Morgan Stanley analyzed the default rates on infrastructure project finance and reported the following findings. In emerging economies, five-year cumulative default rates for infrastructure projects were lower than that of the corporate debt (14.69% v. 19.56%). The same is true for developed markets (five-year: 1.23% v. 7.20%). Infrastructure bonds also have a tendency to transition to a better bond rating, increasing the safety of such investments, further illustrated through the fact that only five projects defaulted, four of which were in emerging market countries.





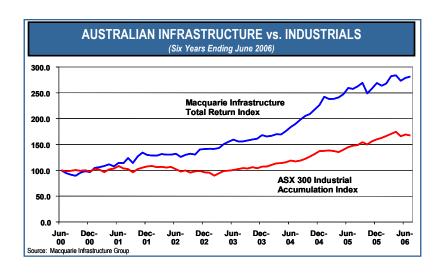
STABILITY OF BOND RATINGS BY INVESTMENT SECTOR							
DATABASE SEGMENT	AVERAGE RATING TRANSITION*						
Infrastructure Projects	96.65%						
Corporate	76.05%						
Infrastructure Projects in Emerging Market Countries	86.89%						
Corporate Debt in Emerging Market Countries	74.80%						
Infrastructure Projects in Non-Emerging Market Countries	98.34%						
Corporate Debt in Non-Emerging Market Countries	76.42%						
Source: S&P Risk Solutions calculation, November 2006 *Reflects the historical probability of a credit rating enhancement							

DEFAULTED INFRASTRUCTURE PROJECTS						
Sector	Country	Year of Default	Reason for Default			
IPP	United States	1999	Closure of plant in an 'inside the fence' power project			
Concession	Panama	2001	Failure to meet traffic volume forecasts for tollroad			
IPP	Cayman Island	2003	Bankruptcy of sponsor in a project that was not bankruptcy remote			
Toll road	China	2000	Failure of municipal government in China to implement tariff increases when projected revenues fell short of expectations, combined with failure of sponsor to provid limited financial support			
Toll road	China	2001				
	Sector IPP Concession IPP Toll road	Sector Country IPP United States Concession Panama IPP Cayman Island Toll road China	Sector Country Year of Default IPP United States 1999 Concession Panama 2001 IPP Cayman Island 2003 Toll road China 2000			

Infrastructure related public securities, as can be expected, have had a volatile investment history. Commodity related businesses have not performed well in 2006, but have had the most solid long-term investment performance. Information Technology (IT) and Telecom related investments have performed well in recent history, but over the long run have not performed as well as other infrastructure related securities. Utilities and Energy have performed well over the long term and have been stable performers across all investment periods. The case of Australian infrastructure security performance is illustrated below.







Risk/Return Analysis

Infrastructure has different performance attributes than other asset classes by offering a much longer duration and potentially higher income yields compared to equities, bonds, real estate, and private equity. Infrastructure asset management requirements range in intensity and risks vary substantially. A breakdown of the different infrastructure risks are provided below. When compared to real estate, infrastructure offers lower construction, entitlement and credit risks, but higher political, liquidity, and internal control risks.

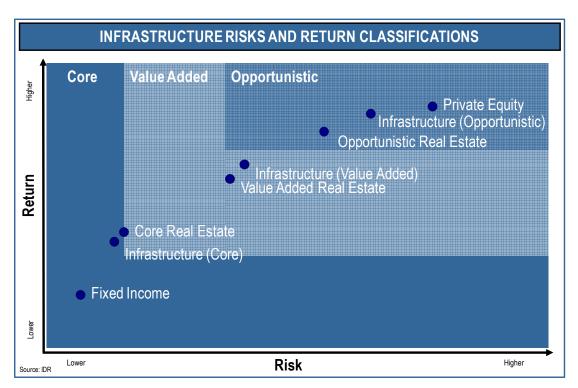
RISKS	TRANSPORTATION	COMMUNICATION	UTILITIES	SOCIAL	vs. REAL ESTATE
Operational	Moderate	High	High	Low	Similar
Credit	Low	Low	Low	Low	Lesser Risk
Political Liquidity	Moderate/High Moderate/High	Moderate Moderate	Moderate Moderate	Low High	Greater Risk Potentially Greater Ris
Market	Moderate	Moderate	Moderate	Moderate	Similar
Internal Controls	Moderate/Low	High	High	Low	Greater Risk
Construction Regulation	Low Moderate	Moderate Moderate	Moderate High	Low Low	Potentially Lesser Ris Greater Risk
Valuation Entitlement/Zoning	Moderate Low	Moderate Moderate	Moderate Moderate	Moderate Low	Potentially Greater Ris Lesser Risk

Infrastructure risk is highly dependent on the investment purpose and manager aggressiveness in pricing, composition of government versus corporate held assets, political relations, and other risks assumed. Risk options in infrastructure assets are highly diverse, much like those in real estate. A development asset usually carries greater risk, but is not always the case. For example, building a school building for a preset coupon should be less risky than trying to generate traffic flow on an operating toll road. International options also bear risk as developing nations may face credit risk, governmental stability issues, and political and legal environments that are not as transparent as mature nations.





INFRASTRUCTURE RISK/RETURN CATEGORIES						
Lower Risk		Higher Risk				
	Risk/Return Spectrum					
4% - 6% Real Return		14% + Real Return				
➤ Operating Assets	➤ Distribution Assets	➤ Development Assets				
➤ Municipal Assets	➤ Healthcare/Storage	➤ Communications				
➤ Forests/Bridges	➤ Airports/Railroads	➤ Emerging Markets				
Source: IDR						

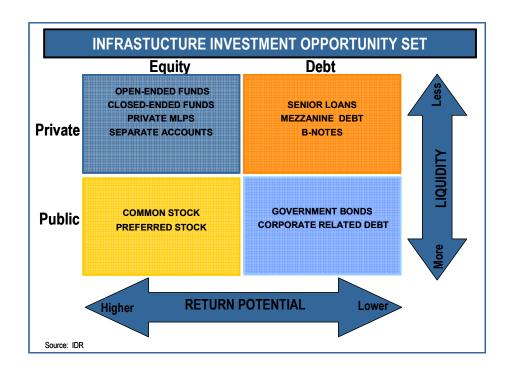


Investment Alternatives

Investment in infrastructure can be done through public equity (stocks), public debt (bonds), private debt (private loans and mezzanine financing), and private equity (limited partnerships and private MLPs). Investments are made in separate accounts/direct investments and/or through pooled vehicles. Each option provides different relative return options, as well as liquidity. A visual description is provided below.











Benchmarking

The infrastructure market has limited benchmarks for use by institutions. Public equities are the furthest in development and have several specialized infrastructure benchmarks. The FTSE Macquarie Global Infrastructure Index and the S&P/UBS Global Infrastructure and Utilities Index are the two most followed indices. The Macquarie Global Index is a large and highly diversified index with 236 constituents and a market cap in excess of \$1.7 trillion. The index includes breakdowns by region, country, and investment sector. The S&P/Global Infrastructure and Utilities Index include a similar breakdown of infrastructure stocks that represent utilities, transportation, and energy with a total market cap in excess of \$1.7 trillion.

For other investments, three other performance comparison options are being utilized. One option is an inflation adjusted return, where institutional investors have created an infrastructure benchmark that targets infrastructure portfolio returns to exceed inflation by a predetermined premium (typically 400 to 500 basis points). Others institutional investors have opted to use an absolute return benchmark, whereby they seek a return in line with their risk appetite (lower for operating/core infrastructure investments, higher for development projects). The final potential benchmark has been a peer analysis. Comparing a funds relative performance to other funds or a portfolio has been utilized to determine how well portfolios have performed.

As investors continue to accept the asset class and define it further in their asset allocation process, we anticipate an industry standard performance benchmark across the different types of infrastructure investment options. Until benchmarks that are more accurate are available, we expect that absolute, inflation adjusted, or peer benchmarks will be the likely options used by institutional investors depending on the intended role of infrastructure investments within an institution's portfolio.





VII. Analysis of Macro Infrastructure Issues

Certain infrastructure investors are concerned with certain investment risks, while others find the benefits far too attractive not to make an asset allocation. This section will address some of the largest strengths and weaknesses facing infrastructure investment in private asset ownership, as well as identify some potential issues that have yet to emerge.

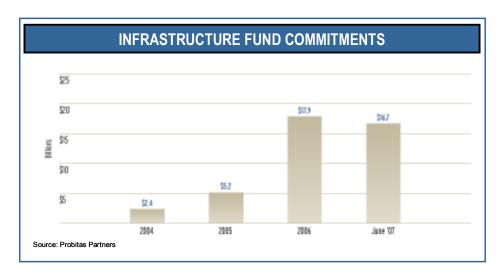
Infrastructure Investment Strengths

- Investment Returns and Cash Yields − Infrastructure investment funds are targeting returns ranging from 10% (core/core-plus funds) to greater than 20% (opportunity funds). Additionally, core funds expect a majority of returns to be generated from stabilized current income; thereby providing investors' dividend yields in excess of 7% per annum. The cash flow nature of assets reduces investment risk with regard to valuation and exit risk. Additionally, the overall return objectives of these funds are competitive with those of traditional real estate and private equity.
- Capital Investment Opportunity Infrastructure assets require a tremendous amount of investment capital (ranging from \$100 million to several billion) creating the potential for an inefficient market, economies of scale, and enhanced investment returns. The potential for economies of scale reduces the operational and asset management risk compared to real estate and private equity. The latter two asset classes require additional employees to manage and oversee the increased amount of acquired assets.
- <u>Duration Unlike typical real estate</u> opportunistic investment strategies, which are highly leveraged and require sale after a short holding period, infrastructure assets generate returns throughout the life of the asset regardless of leverage utilized. Most infrastructure concessions and contracts have a long life (20-99 years) with strong annual cash yields (up to 15% on value added projects).
- Private Market Efficiency According to UK Partnerships, the efficiency gained by private market ownership has resulted in increased institutional satisfaction, with projects more likely completed within the budget and timeframe allotted by the concession. A continuation of these efficiencies by the private sector are expected to increase investor satisfaction, extend the utilization of PPP models to future infrastructure projects, increasing deal flow risks, and while reducing political risks.
- <u>Infrastructure Investment Market Size</u> The infrastructure market is extremely large. By utilizing conservative estimates and comparing market sizes to that of GDP and stock market capitalization, the global market should be between \$10 trillion and \$20 trillion. Ownership is roughly split between government and corporate entities, which should provide institutional investors a diversified base of market opportunities.





- Hedging Capacity Infrastructure assets have a different performance history than other asset classes. These assets provide income yields and are long term, many with concession arrangements providing inflationary protection covenants. These factors allow potential investors to use infrastructure assets to hedge portfolio risk, as a means of reducing inflationary risk, duration risk, cash flow risk, or investment return risk.
- Barriers to Entry Infrastructure assets are normally regulated monopolies, often with little or no competition. Assets, like roads or power generation facilities, often require significant upfront capital expenditures with long-term payout requirements. As a result, the assets are difficult or unnecessary to replicate and often require regulatory approvals. The lack of competition provides investors safe and consistent cash flows/returns.
- Capital Flows Much like real estate and other private investment options, infrastructure is experiencing an increase in capital flows. Pension funding deficits and payout ratios are requiring investment in non-traditional options that provide a higher risk return profile which enable them to meet pension obligations. Additionally, a recent count of infrastructure commitments by Probitas Partners confirms the current trend of private equity infrastructure investment.



Infrastructure Investment Weaknesses

Political Risk – Private ownership of public assets is highly controversial. The sale of ports, bridges, and other assets to foreign entities or entities with foreign owners frequently finds its way into news articles, newspapers, and various periodicals. Additionally, the underlying risk of operations is increased due to the public reliance on the underlying assets. A disruption in power, water, or sewage operations could lead to public discontent and severely damage or destroy an infrastructure concession. However, the success of PPP projects will likely increase deal flow into the sector, offsetting political risk.





- Exit Strategy and Market Liquidity Although the exit strategies listed in the previous section have been identified, realized liquidity remains to be tested. The assets are large and the number of interested parties capable of purchasing these assets has yet to be determined. When considered in conjunction with political risk, transferring a domestic asset to a foreign entity could prove to be a difficult exit strategy.
- Manager Track Records Although the infrastructure universe is significant (since a large proportion of assets are governmentally held); few managers have the expertise and track record seen in other asset classes. There are a few boutique firm offerings, but most are sponsored by global investment banks, often lead and staffed by individuals with some infrastructure experience or structured finance professionals. Due to the limited fund offerings and track records, asset specialists and top performers have not been clearly identified.
- Leverage and Interest Rate Risk Infrastructure assets are going to be highly leveraged compared to other asset classes, with past deals using leverage of 50% to 90% of gross asset cost. The higher levels of leverage increase risk with regards to current operations and cash flows. Additionally, the exposure to leverage increases interest rate risk. In the United States, long-term interest rates are likely to increase, raising the cost of capital and the level of required returns necessary to generate leveraged enhancement.
- Asset Control and Concession Arrangements Asset control, government concessions and various constraints have created significant pricing discrepancies. For example, there was greater than \$1 billion between the highest and second highest bid for the Chicago Skyway. A greater number of covenants in a governmental concession increase the risk of defaulting on contract terms. Asset control and concession arrangements also intertwine with the political risks aforementioned.
- Economic Interdependence The success of infrastructure, as well as the needs for infrastructure, are interdependent with the underlying economy. Infrastructure needs are tied to economic growth, population growth, population density, and various other economic influences. Payment streams are also dependent on governmental strength and the underlying necessity of the asset (as is the case with toll roads). This interdependence can greatly affect the success of infrastructure projects.
- Realized Investments and Market Cycle History The market for private equity infrastructure is limited, although the public markets demonstrate strong risk adjusted returns. As a relatively new asset class, the majority of institutional activity regarding infrastructure has focused on investment and capital commitments, resulting in few demonstrated sales and realized returns. For example, the general investment community has reported returns in excess of 15%, but the amount of realizations is significantly less than real estate or private equity. Additionally, due to the limited amount of private equity infrastructure ownership, little is known of market cycles and market cycle risk. Open-ended funds have never experienced a market run and of the magnitude of an infrastructure market downturn.





■ <u>Limited Track Record</u> – The track record for private investments is limited with the earliest track records extending to the late 1980's/early 1990's, but little is available on performance. There are no industry benchmarks that track the investment market or returns. Although some benchmarks can identify government bond performance and publicly held infrastructure equity securities, privately held equity and debt is less transparent. Many investment teams in the US consist of former structured debt professionals and few have the private equity experience.

Untested Macro Issues

- Sovereign Immunity The extension of sovereign immunity to private owners has yet to be tested. The connection between the underlying investment manager's responsibilities and the risk associated with the infrastructure assets is not clearly defined. For example, if there is a major car crash on a toll road owned by a private operator, their liability has not been demonstrated. No outstanding court cases have involved litigation about the safety and operations of public assets and little is known whether sovereign immunity will extend to private operators.
- Political Risks—Political risks have not been fully tested in the infrastructure market. Primary concerns in this area include increasing user fees and the ownership of the asset by foreign entities. Although ownership risks have been conveyed by public dissent and political discussions, risks regarding concession defaults, significant term changes, and other political issues remain untested.
- GDP and Economic Growth Risk Global economic growth has been strong and many market players expect continued growth. However, global GDP growth is not an exact science and is difficult to predict accurately. Some markets require infrastructure investment to support GDP growth, and vice versa. However, the test of GDP growth and governments are based on expectations and not realizations.





VIII. Concluding Thoughts

Infrastructure investment is a recent investment phenomenon that has been gaining significant interest, both in the United States and abroad. The methods of investment have evolved over time, while the number of investment options and availability of investment vehicles has been growing. The biggest factor influencing the market now is the convergence of government's need for capital with the private sector's appetite for stable, long-term returns. Supply is plentiful, demand is strong, and potential investment returns and duration match the needs of private capital sources.

Infrastructure investment shares several facets with real estate. The asset class involves real asset ownership, a variety of risk profiles, and multiple investment choices. Investors can use infrastructure to enhance returns, generate cash flow, and potentially hedge against inflation. A number of potential issues have yet to play out regarding the asset class. Risks include political issues, the lack of manager track records, the lack of an experienced market place, and various others. Conversely, infrastructure has substantial benefits that mitigate the potential concerns. The assets have performed well, most contracts are backed by governmental sources, and development does not necessarily increase the risk of assets.

Overall, infrastructure provides investors a new investment opportunity that can help institutional investors meet investment goals and objectives. Given the magnitude of capital being attracted by alternative asset classes, including infrastructure, the opportunity continues to grow. Continued government interest in selling assets, merged with increasing economic and maintenance needs, should provide a strong investment market that will continue to mature and expand in the years to come.





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